



INTEGRATED CONTINGENCY PLAN (ICP) AND STORMWATER POLLUTION PREVENTION PLAN (SWP3) TRAINING 2016



ICP/SWP3 - Agenda



- **Safety Topics**
- **Laws and Regulations**
- **Integrated Contingency Plan (ICP)**
- **Storm Water Pollution Prevention Plan (SWP3)**
- **WFF's Environmental Management System (EMS)**



Laws and Regulations



- **Federal**
 - **Clean Water Act – 1972 - Wastewater**
 - **Oil Pollution Act (OPA) – 1990 – Big Spill**
 - **Resource Conservation and Recovery Act (RCRA) – 1976 Hazardous Waste**
 - **State DEQ regs**



ICP Requirement



Why have an Integrated Contingency Plan?

- >1,320 gallons aboveground oil storage.
- As of December 2015, WFF has over 200,000 gallons of fuel in aboveground storage and over 300,000 gallons total for all petroleum products.





ICP Applies To



Any container \geq 55 gallons which contains oil

This includes:

- **Drums**
- **Tanks (aboveground and underground)**
- **Transformers**
- **Mobile Re-fuelers when parked**
- **Other oil storing equipment**



ICP Overview



- Goal to:
 - Minimize hazards to humans and the environment from any release of oil or hazardous substance at WFF
- Coordinates efforts with:
 - WFF personnel
 - Local fire and police departments
 - Outside contractors
 - Department of Environmental Quality (DEQ)
 - Environmental Protection Agency (EPA)



ICP Overview



**Spill Prevention Control
and Countermeasures
Plan (SPCC)**

**Storm Water Pollution
Prevention Plan (SWP3)**

**Hazardous Waste
Contingency Plan
(HWCP)**

**Integrated
Contingency
Plan (ICP)**





2015 Edition



National Aeronautics and Space Administration



Integrated Contingency Plan



National Aeronautics and Space Administration
Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

www.nasa.gov

December 2015

Available at:

<http://sites.wff.nasa.gov/code250>



CALL 911



WFF Integrated Contingency Plan

37.01.01.16402

**IN CASE OF A SPILL, FIRE OR EXPLOSION AT
THIS FACILITY,
CALL 911 IF ON-SITE, OR
CALL 757-824-1333 IF OFF-SITE**

EMERGENCY PHONE NUMBERS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

On-Site Phone Numbers:

**EMERGENCY 911 757-824-1333 (for mobile phones
or when off-site)**

Emergency Coordinators:

Member	Facility Phone	After Hours Phone	Radio Page
Captain On-Duty	911	911	Fire Dispatch
Fire Station #1	911	911	Fire Dispatch
Fire Station #2	911	911	Fire Dispatch

Environmental Coordinators:

Member	Facility Phone	Mobile Phone	Home Address
Theodore J. Meyer (Associate Chief, Medical and Environmental Division)	Ext. 1987	(443) 366-2268	30170 Providence Drive Salisbury MD 21804
Kelly Busquets (Alternate) (Environmental Engineer)	Ext. 2041	(808) 351-9324	2150 Orchard Drive Pocomoke MD 21851

Off-Site Phone Numbers:

National Response Center	800-424-8802
U.S. Environmental Protection Agency Region 3 Office	215-814-5000
	800-438-2474
Virginia Department of Environmental Quality	
Tidewater Regional Office – Main Number	757-518-2000
Virginia Department of Emergency Management (24 hours)	800-468-8892
Eastern Shore Hazardous Material Response Team	911
Virginia Hazardous Material Coordinator	757-363-3891

Emergency
Contacts
for
WFF



ICP Table of Contents



- 1. Plan Administration**
- 2. Facility Description & Bulk Storage Container Information**
- 3. Discharge Prevention**
- 4. Discharge Response Equipment and Training**
- 5. Spill Countermeasures**
- 6. Worst Case Scenerio**
- 7. Facility Inspections, Tests, and Records**
- 8. Integrated Contingency Plan Deviations**



ICP Appendices



Appendix A	Certification of the Applicability of the Substantial Harm Criteria
Appendix B	Wallops Flight Facility Site Maps
Appendix C	Underground Storage Tanks and Oil Storage Summaries
Appendix D	Tank and Potential Discharge Data
Appendix E	Hazardous Waste Accumulation Areas and Evacuation Routes
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Appendix G	Supplies and Equipment Inventory of Spill Response
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Appendix P	Storm Water Pollution Prevention Plan
Appendix Q	Fuel Delivery Standard Operating Procedures



Storage Tanks



- Outdoor Aboveground Fuel Tanks



D-9A&B



D-1



Rentals



D-50



F-26



Storage Tanks



- Indoor Aboveground Fuel Tanks



V-3



NOAA



Mobile
Generator



Z-62





Storage Tanks



- Underground Storage Tanks
- Oil Filled Equipment



R-30



N-161



MARS Pad 0-A



Oil-Filled Containers



E-2



N-223

- Containers with 55 gallon capacity or greater
- Includes cooking oil



Storage Tanks



Large Spill Kit

(95-gallon spill kit absorbs up to 63 gallons; neon green color for high visibility and a snap on lid for easy access)



Anti-Siphon Valve

(Prevents fuel from exiting tank if a line is broken or leaking)



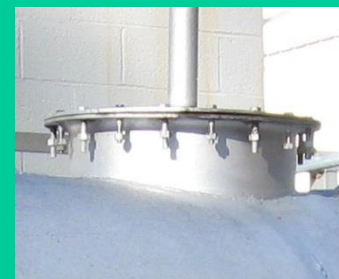
Spill Basket

(Used to catch any fuel that spills during filling of the tank)



Long Bolts on Manway Opening

(The long bolts allow the manway cover to lift up and relieve pressure in the tank)



Tank Grounding System

(Used to discharge the tank in the event of a charge build up from lightning)



Adequate Lighting

(There should be adequate lighting 24 hours a day so that any individual can easily see if the tank is leaking or if a spill has occurred)



Neoprene Rubber Piping

(Needs to be replaced due to dry rotting and rubbing against objects)



Seal Concrete Dike

(The concrete dike must be sealed liquid-tight to prevent any fuel contamination in the event of a leaking tank)





Storage Tanks



Replace Plastic Travel Cap with Painted Steel Cap

(Plastic will degrade in the presence of petroleum and needs to be replaced with steel cap)



Spill Basket Lock

(Placed on all tanks to prevent individuals from stealing or contaminating the fuel)



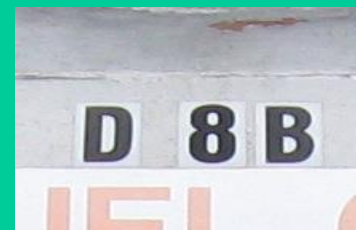
Driver Delivery Signs

(Present by all tanks and must be visible for the fuel delivery driver)



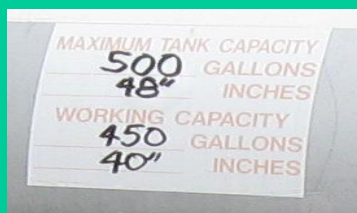
Proper Tank Identification

(Present on all tanks and must be visible for the fuel delivery driver; to verify proper tank identification please contact WFF Environmental Office)



Tank Capacity and Inches Signs

(Present on all tanks and must be visible for the fuel delivery driver; to verify proper capacity and inches please contact WFF Environmental Office)



No Smoking Signs

(Present on all tanks and must be visible for the fuel delivery driver)



Label Piping

(Helpful in the event of a leaking pipe or during pipe maintenance)



NFPA Label

(Present on all visible sides of the tank; color coded, numerical system for indicating the health(B), flammability(R), reactivity hazards(Y), and special precautions (W); 4 is extreme and 0 is minimal)





Vehicle Fueling



- No Smoking. Turn off engine. Leave electronic devices in vehicle. Discharge static electricity before fueling. If a fire starts, use the emergency stop button (ESTOP) to stop pumping fuel.
- Do not leave pump unattended when in use.



Fuel Deliveries



- Shut off engine unless used for transfer operation.
 - Set brakes, chock wheels prior to fuel transfers.
 - Check for sorbent material in delivery truck.
 - Protect adjacent storm drains.
- Perform bonding/grounding prior to fuel transfers, if necessary.
 - Use drip pails below hose connections.
 - No smoking during fuel transfers.



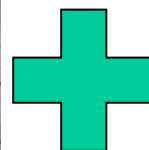
Fuel Deliveries



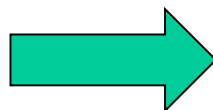
- Confirm that the tank or vehicle being filled can accept delivered volume.
- Maintain an unobstructed view of cargo tank and hose at all times.
- Inspect delivery vehicle for leaks prior to loading and prior to vehicle departure.
- Verify complete disconnect of hoses and bonding / grounding prior to removal of wheel chocks.



Fuel Deliveries



NO SMOKING



**Before
Fueling**



Note: Procedure can be found in Section 3



Fuel Deliveries



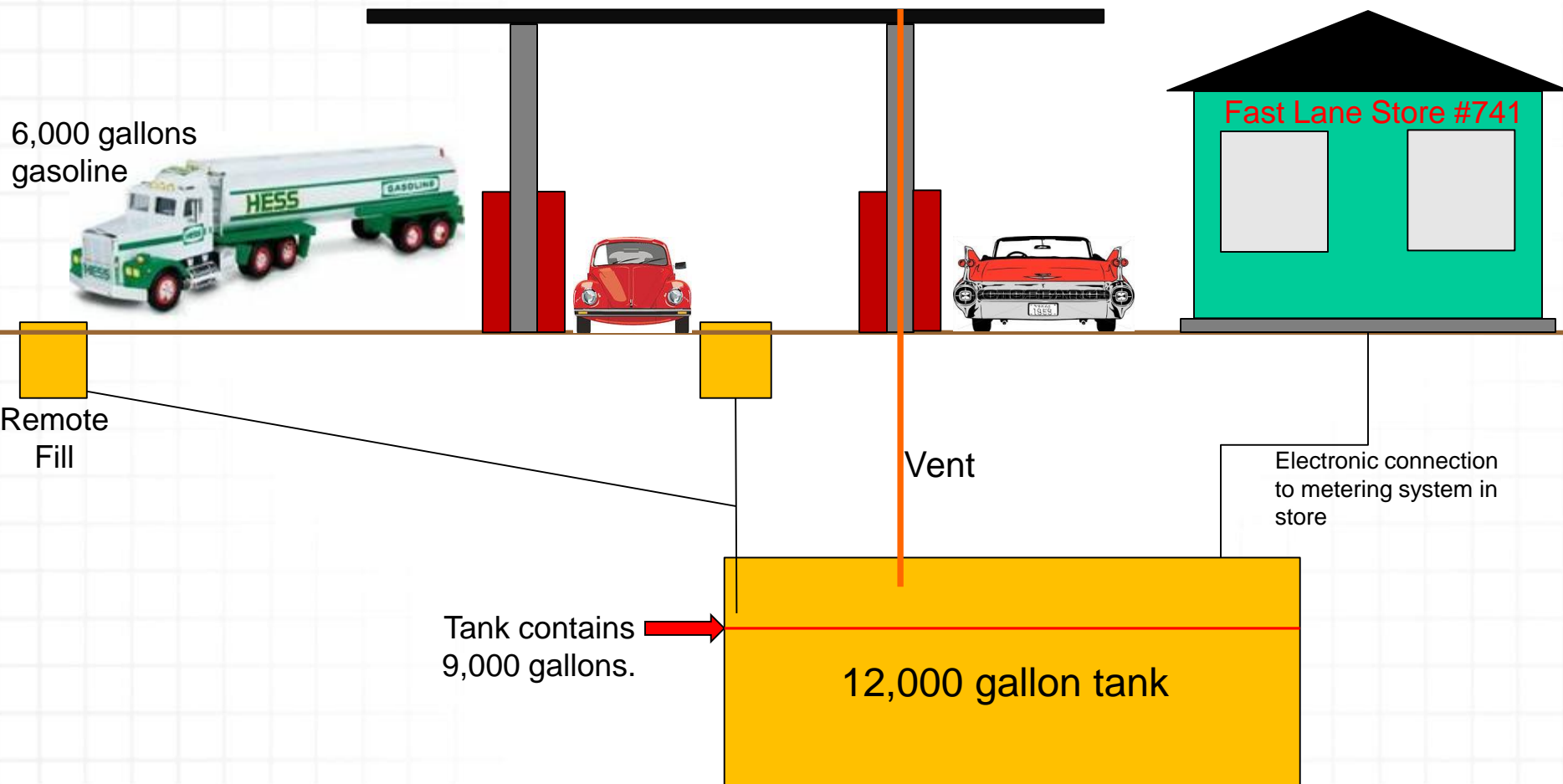
Fuel delivery drivers AND tank owners are responsible for spill prevention.

**2015 – Rt. 90
and Brady
Drive in
Biloxi, MS.**





Filling Station Design



Disaster waiting to happen...



Why Should You Care?





Discharges



- Immediately notify the WFF Fire Department. Use internal fire alarm if available.
- Eliminate potential spark sources.
- Stop the flow.
- Contain the liquid with sorbent booms, etc.
- Debris from cleanup containerized properly.
- The FD and EO will complete applicable incident reports.
- Environmental Coordinator makes appropriate notifications of a reportable discharge:
 - Spreads beyond the immediate discharge area;
 - Enters water or has the potential to enter the water;
 - Spreads beyond WFF boundaries;
 - Requires special equipment or training to clean up;
 - Poses a hazard to human health or safety; or
 - There is a fire or explosion or the danger that one may occur.



Major Discharge



- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water or has the potential to enter the water;
- The discharge has spread beyond WFF boundaries;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a fire or explosion or the danger that one may occur.



What Should Be Done?



- Wash this spill to the nearest storm drain?
- Call 911?
- Walk away?





Waters of Virginia



“The discharged material enters **water** or has the potential to enter the water” applies to:



Surface Waters



Groundwater



Wetlands



Storm sewer systems



Refugio State Beach, California May 18, 2015



- Crystal Clear Water
 - Incredible Waves
 - Beautiful Scenery
- Exceptional Wildlife Viewing





Refugio State Beach California May 19, 2015



An estimated 20,000–100,000 gallons (less than 1% of Valdez spill) of crude oil spilled from a broken pipeline, pouring into the ocean for several hours. Two separate oil slicks covered nine miles of coastline in widths up to four miles.

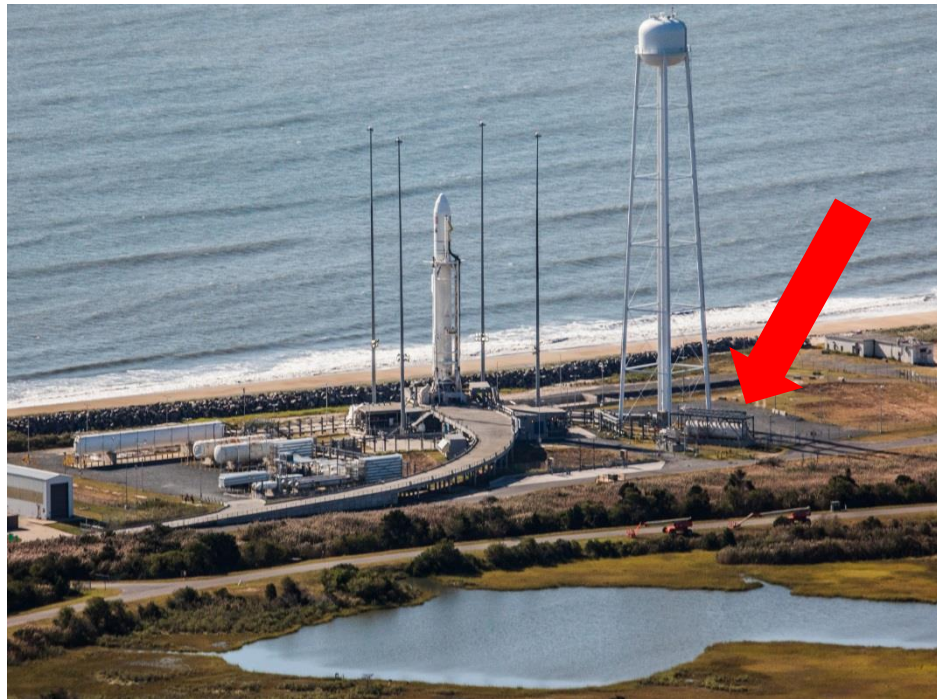




Wallops Island Launch Pad OA



One tank at WFF containing 30,000 gallons of RP-1 (kerosene) is located just a few hundred feet from the Atlantic Ocean and over 300,000 gallons of petroleum products total at WFF.



Be safe, be alert, and report spills or concerns ASAP!



Refugio State Beach, California



May 20, 2015

Clean up by hundreds of volunteers and government employees took approximately two months.

July 17, 2015





Countermeasures



Countermeasures to contain and divert spills from entering waters of the Commonwealth of Virginia include the following:

- Elimination of the source of the spill (i.e., shutting valves, banding piping, plugging ruptured tanks, etc.);
- Strategic placement of sorbent materials around or on top of spilled material;
- Placement of booms around proximate storm drain inlets and sanitary sewer manholes; and
- Construction of earthen dikes in the immediate area or downstream of the spill.

Note: Procedures can be found in Section 5



What If ...





And ...





Then



**Call
911**



Countermeasures



Worst Case Scenario

Spill Drill Exercise



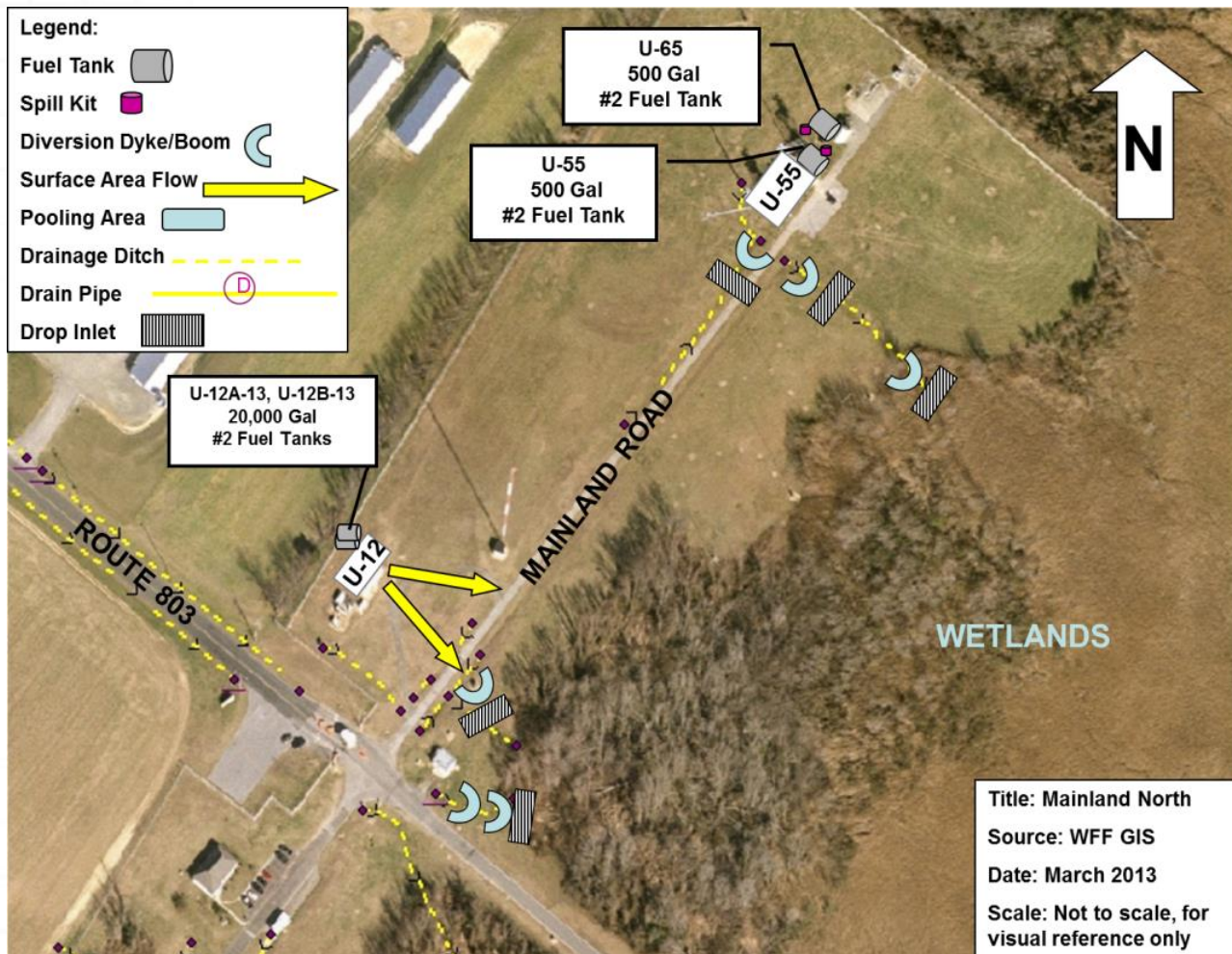
Note: Worst Case Scenerios are described in Section 6.



Countermeasures



Incident Briefing Plans



Note: Incident Briefing Plans can be found at the WFF Fire Department.



Weekly AST Inspection



**Daily & Weekly
Inspection is
required for:**

D-1

D-9A

D-9B

F-26-1A

F-26-1B

U-12A&B

MARS 33

**Note: Procedures
found in Section 7.**

**Forms found in
Appendix M.**

WEEKLY INSPECTION FORM ABOVEGROUND STORAGE TANK SYSTEMS:

Facility: Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

Date: _____
Completed By: _____
Company: _____

SYMBOLS: Y – Yes N – No S – Satisfactory U – Unsatisfactory NA – Not Applicable D – Diesel Oil J – Jet Fuel MO – Motor Oil UO – Used Oil			
ITEM	CONDITIONS	COMMENTS ⁽¹⁾	REFERRED TO
TANK ID: _____			
Tank Condition			
Support Condition			
Staining on concrete or adjacent surfaces			
Tank area clear of debris			
Secondary containment free of oil, water and debris			
AST label appropriate and legible (not faded)			
Threaded fill caps kept closed when not in use			
Evidence of fuel spillage at remote fill and/or direct fill			
Fuel leaks visible on top of the tank or from piping			
Fuel gauge functioning properly			
All vent systems operational			
Status of spill kit supplies			
Is corrosion (rust) present on exterior surface of tanks, fittings or other equipment?			

(1) Provide comments below or attach additional sheets as necessary. Be sure to note the item you are commenting on.

KEEP ON FILE FOR FIVE (5) YEARS.
MAKE AVAILABLE TO REGULATORY PERSONNEL UPON REQUEST.



Monthly AST Inspection



MONTHLY ABOVEGROUND STORAGE SYSTEM INSPECTION CHECKLIST				
Building Number	Tank Number	Facility Name/Address	Inspected By	Date
Were any issues found? Circle: YES or NO			Was Task Order issued? Circle: YES or NO	

CATEGORY	DESCRIPTION		
TANK COMPONENTS		Y, N, or N/A	COMMENTS
Condition of Tank	Is paint in good shape?		
	Is concrete pad or dike in good condition?		
	Does tank have adequate vehicle protection?		
Overfill Prevention	Does the tank have an overfill alarm and is it working properly?		
	Is the tank equipped with a functioning overfill prevention valve?		
Tank Gauge	Is the tank gauge legible, accurate, and working properly?		
Tank Ladders or Stairs	Is the tank ladder or stairs in good condition?		
Secondary Containment	Is the secondary containment area dry? (Interstitial or Concrete Dike)		
Interstitial Leak Detection	Have the leak sensors been physically activated/tested? (Remove leak sensor and physically raise the rod. Should perform once annually. Place date completed within comments.)		
Concrete Containment	Are the drain holes free of debris?		
Leaks	Is the tank area clean with no evidence of any leaks or spills? (Wipe areas clean.)		
Tank Saddles	Are the saddles in good condition with no evidence of corrosion where the tank meets the tank saddles?		
Vent	Are the primary and emergency vents unrestricted and working properly?		
Signage	Does the tank have proper signage: Hazard Diamond, Product, Working and Design Capacity, Deliver Driver Instructions, and Tank Number?		
TANK FILL AREA		Y, N, or N/A	COMMENTS
Spill Containment Manhole (Spill Bucket)	Is the spill bucket free of dirt, trash, water, or product?		
Fill Pipe	Is the fill cap in good condition, seals tightly, and locked?		
Spill Kit	Is the spill kit in place and properly stocked?		
PIPING		Y, N, or N/A	COMMENTS
Condition of Piping	Is paint in good shape and no corrosion present?		
Support	Is the piping properly supported?		
Leaks	Are there visible stains or leaks present? (All stains should be wiped clean.)		

Instructions: If certain equipment is not required and/or not present, make a notation in the "COMMENTS" column. Describe the issues in the "COMMENTS" section and notify the appropriate person to request a task order be issued.

ADDITIONAL COMMENTS:

Monthly
Inspection
is
required for
all
aboveground
storage
tanks.



Monthly Drum Inspection



MONTHLY INSPECTION FORM DRUM STORAGE AREA

Facility: Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

Date: _____
Completed By: _____
Company: _____

**Monthly
inspection
is required for
all
55 gallon
drums.**

ITEM	CONDITIONS	COMMENTS ⁽¹⁾	REFERRED TO
DRUM STORAGE AREA _____			
Containment area conditions			
Labels appropriate and legible			
Staining on concrete floor – evidence of leaks/spills			
Adequate spill kit supplies			

(1) Provide comments below or attach additional sheets as necessary. Be sure to note the item you are commenting on.

KEEP ON FILE FOR FIVE (5) YEARS.
MAKE AVAILABLE TO REGULATORY PERSONNEL UPON REQUEST.

42



Inspections





Quiz



When should we report a release?

Who should we contact?



What Should We Do in the Event of an **Emergency?**



**For ALL spills
and releases,
notify the
**Wallops Fire
Department**
at:
Ext. 911
or
757-824-1333
**(if using a
mobile
phone)****





Reporting a Spill



Provide:

Time of spill

Location of spill

Type/name of material spilled

Estimated quantity

Status of spill

Cause of spill

Name and code of reporting party



OB Area Contingency Plan



Identify all sources of groundwater contamination

- **Operations – ejected fuel**
- **Non operations – vehicle leak**
- **Emergency – fire fighting water**
- **Groundwater monitoring – spill into open well**

In the event of an emergency at the Open Burn Area:

- **Evacuate the area**
- **Spread the alarm verbally**
- **Call 911**



SWP3

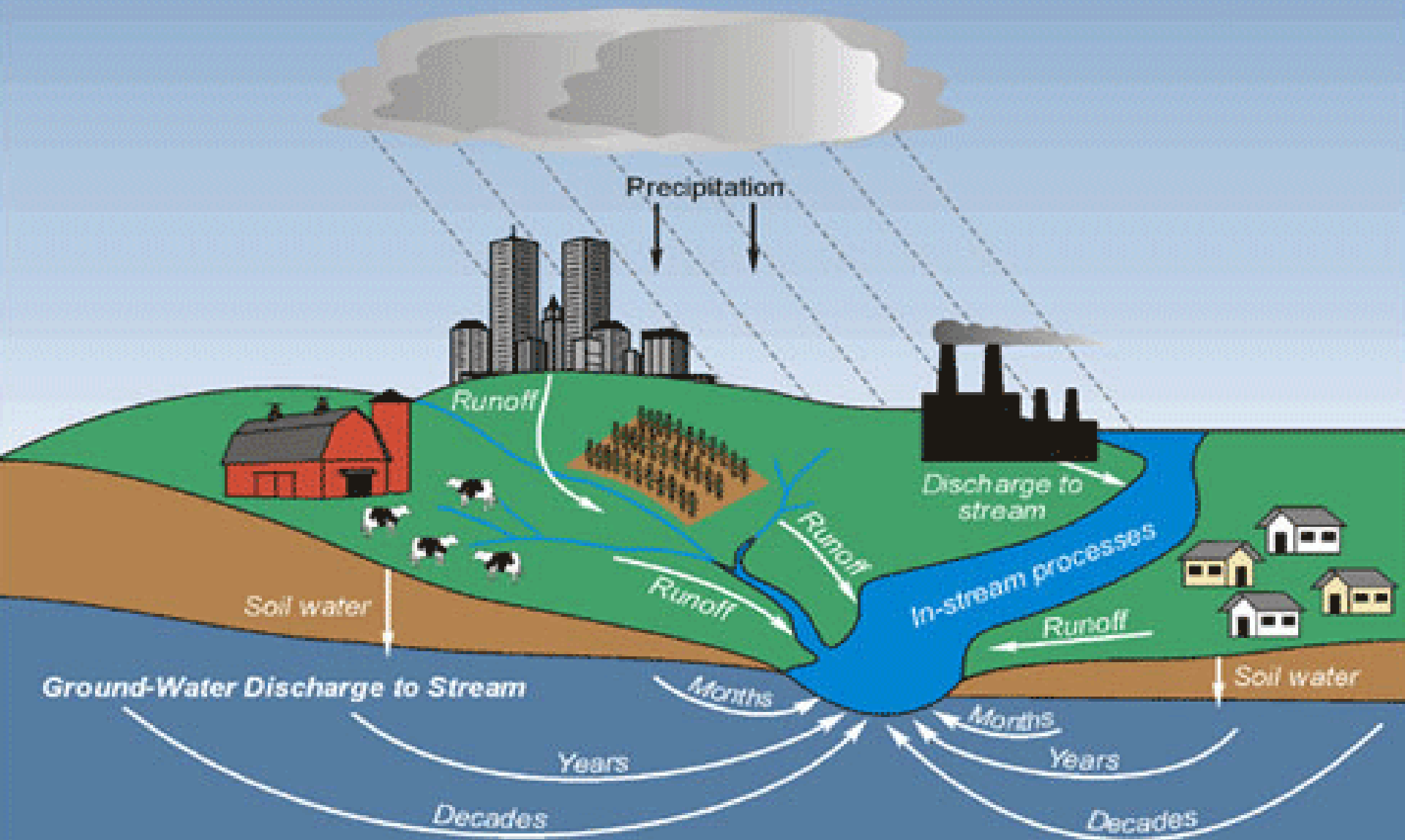


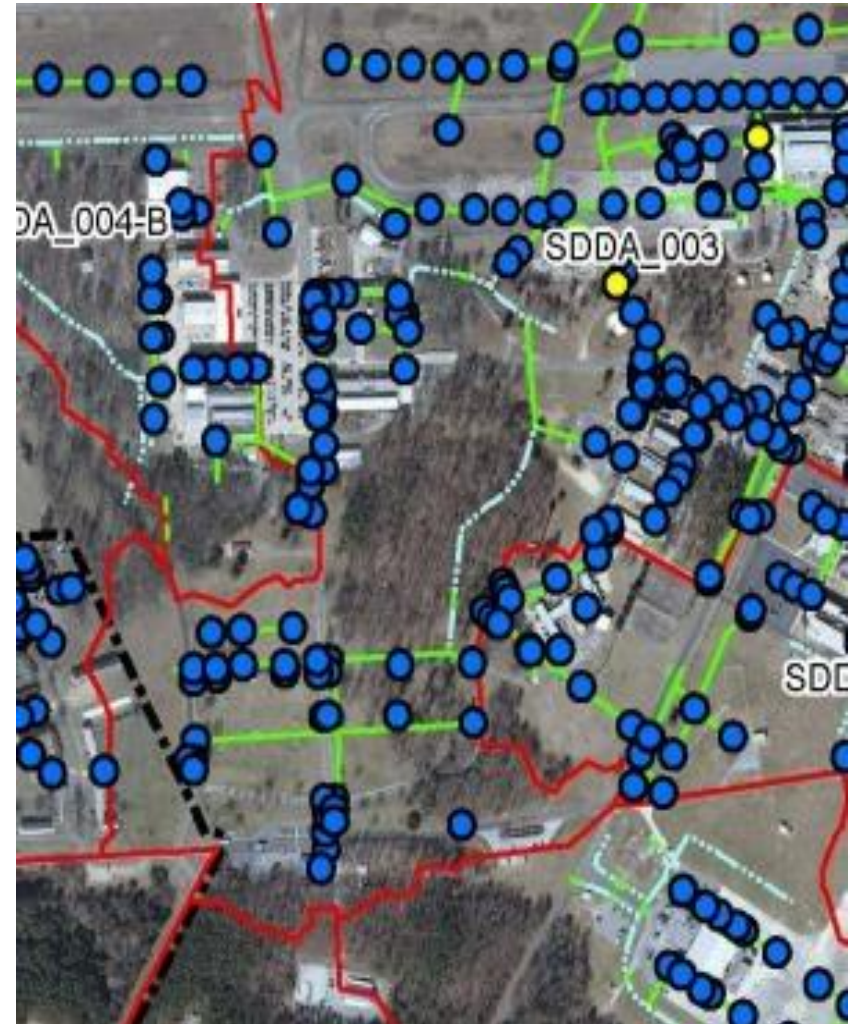
The Stormwater Pollution Prevention Plan (SWP3):

- Is required by the Virginia Pollutant Discharge Elimination System (VPDES) permit
- Goal is to minimize the potential pollutants which could be carried away in stormwater discharge.



Sources of Pollutants





50



Mainland and Island Drainage Features





Potential Pollutant Sources



Activities at WFF Addressed in SWP3:

- Petroleum Storage
- HW Accumulation Areas
- WFF Section 313 Water Priority Chemicals
- Vehicle Maintenance Facility
- Aircraft Runways
- Rocket Motor Storage Areas
- Environmental Areas of Concern
- Outdoor Drum Storage Areas
- Construction/Land Clearing
- Launch Support



BMP HW and Petroleum



Hazardous Waste Accumulation, Petroleum Storage, Drum Storage

- Store 55 gallon containers on secondary containment
- Attend ICP/SWP3 Training
- Complete monthly drum or HW inspection
- Limit outdoor storage of all containers and materials including materials such as scrap metal which may have residual oil
- Use good housekeeping practices (clean-up small spills, sweep-up and containerize spill material and metal shavings, pick up trash, etc.)



BMP HW and Petroleum



WFF Section 313 Chemicals Water Priority Chemicals

WFF reports for Section 313 Water Priority Chemical Lead and Lead Compounds

- Lead sheet metal – F10 Machine Shop
 - Separately containerize scrap indoors
 - Notify Environmental of machine and cutting fluid where lead was machined
- Lead Solder – WFF
 - Keep solder scraps properly contained in HW container
 - Call Environmental for a pick-up when full
- Rocket motor propellant
 - Containerize ejected propellant, label and store in Satellite Accumulation Area



BMP Vehicle Maintenance



Preventive maintenance



Sorbent pads while working



Cover storm drains
during outdoor
repairs



BMP Equipment Washing Management of Runoff



Wash oversize vehicles only at the D-1 Hangar Wash Rack





BMP Aircraft Runways



- Inspecting fuel delivery trucks
- Training
- Covering storm drains when fueling
- Sweeping and vacuuming of runways – FOD removal
- Grass buffers between runways and drop inlets

Stormwater and the Construction Industry

Protect Natural Features



Bad



Good

- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing



Bad



Good

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers



Bad



Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing



Bad



Good

- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Site Stabilization



Bad



Good

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances



Bad



Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes



Bad



Good

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles



Bad



Good

- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection



Bad



Good

- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.



BMP AOC



Sediment and Erosion Control during work at Environmental Areas of Concern (AOC)





BMP Housekeeping



Cleaning practices affect your sanitation score...and our water.



- Wash mats or rugs in mop sinks.
- Don't empty mop buckets outside.



BMP Facility-wide



Visual Inspections of Storm Drains





Clean Water



*Everybody's
Business*



10 Things You Can Do to Prevent Stormwater Runoff Pollution

- Use fertilizers sparingly and sweep up driveways, sidewalks, and gutters
- Never dump anything down storm drains or in streams
- Vegetate bare spots in your yard
- Compost your yard waste
- Use least toxic pesticides, follow labels, and learn how to prevent pest problems
- Direct downspouts away from paved surfaces; consider a rain garden to capture runoff
- Take your car to the car wash instead of washing it in the driveway
- Check your car for leaks and recycle your motor oil
- Pick up after your pet
- Have your septic tank pumped and system inspected regularly



For more information, visit
www.epa.gov/nps or
www.epa.gov/npdes/stormwater



ICP/SWP3 Points of Contact



If you have ANY questions or concerns please call any of the following people:

Owen Hooks – x1941

Monica Borowicz – x1023

Marianne Simko – x2127

Shane Whealton – x1090

Hazardous Waste Line – x1718



Water Conservation

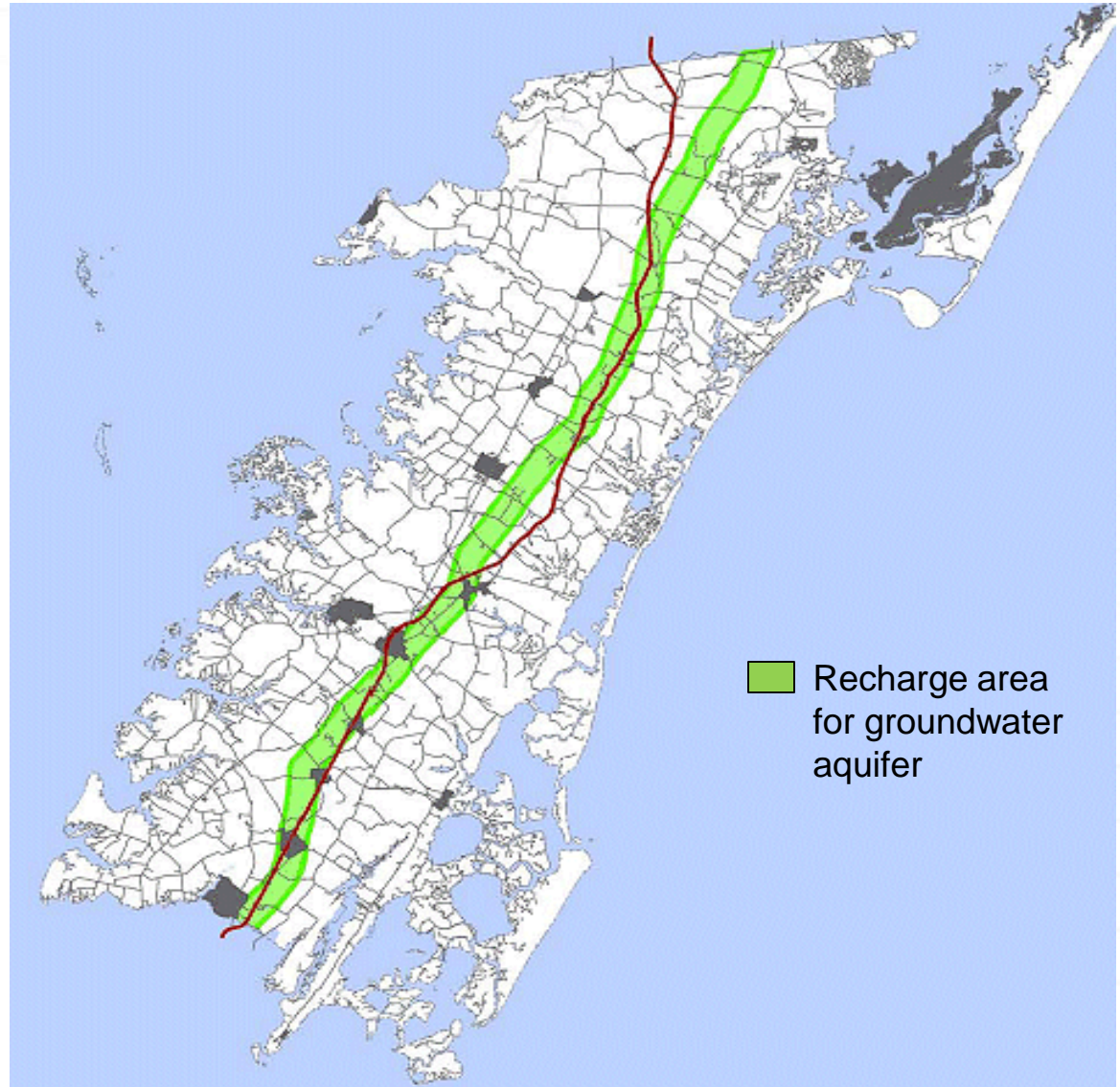


Eastern Shore of Virginia is an EPA designated Sole Source Aquifer

Water Quality is an EMS Medium Priority

Executive Order 13693

- Reduce potable water consumption by 36% in FY 2025
- Reduce industrial, landscaping, and agricultural (ILA) water by 2% annually through FY2025
- Install green infrastructure to help with storm and waste waster management





Water Conservation



What we do...

- Low-flow water fixtures
- Participate in Regional Groundwater Meetings
- Drinking water aquifer not used for cooling towers

What you can do...

- Report leaks to HELP Desk
- Consider ways to reduce water use in your work



Environmental Policy



GSFC commits to conducting its mission in a manner that promotes environmental stewardship. As an integral part of all mission planning and implementation, Goddard's Environmental Policy is to:

- a. Consider the neighboring natural environment while executing the Goddard Mission;**
- b. Comply with relevant federal, state, and local legislation and regulations; Executive Orders; NASA policies and other requirements;**
- c. Prevent pollution and conserve natural resources;**
- d. Implement pragmatic and cost effective solutions to environmental problems;**
- e. Communicate with the Goddard family, our partners and the public; and**
- f. Continue to improve our environmental performance through our environmental management system including:**
 - 1) Promote awareness through education and training;**
 - 2) Consider the environment as we do our jobs;**
 - 3) Explore advances in environmental technology; and**
 - 4) Provide a framework for setting objectives and targets.**

These commitments enable each of us to do our part for environmental stewardship in our community.



High Priorities for FY2016:

- **Hazardous Waste**
- **Site Restoration**
- **Environmental Planning**
 - **Air Quality**